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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
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10/784,335

02/23/2004

Seiji Kanba

36856.1203

8706

35510

7590

04/01/2005

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EXAMINER

HAM, SEUNGSOOK

ART UNIT

PAPER NUMBER

2817

DATE MAILED: 04/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

ET

|                              |                        |  |                     |  |
|------------------------------|------------------------|--|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> |  | <b>Applicant(s)</b> |  |
|                              | 10/784,335             |  | KANBA ET AL.        |  |
|                              | <b>Examiner</b>        |  | <b>Art Unit</b>     |  |
|                              | Seungsook Ham          |  | 2817                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 December 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/23/04, 6/15/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

Figures 6-8A should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-11 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11 of copending Application No. 10/780,400 (US Pat. App. Pub 2004/0183629 A1). Although

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the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims are the same except in semantics. It should be noted that "a via-hole" recited in instant claim 1 is claimed in claim 10 of copending application '400.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Mizoguchi et al. (US Pat. App. Pub. 2004/0183629).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Mizoguchi et al. (figs. 1-3 and 9) discloses a dual-mode bandpass filter comprising: a dielectric substrate 2; a resonator electrode 3 having an aperture 3a (see

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fig. 9); first and second ground electrodes 10 disposed on upper and lower surfaces 2c, 2d of the dielectric substrate; input-output coupling electrodes 4, 5 coupled to the resonator electrode; input-output terminal electrodes 6, 7 provided on the outside surface of the dielectric substrate and being electrically connected to the input-output coupling electrodes; a via-hole electrodes that penetrates through the aperture in the thickness direction of the dielectric substrate and electrically connected to the first and second ground electrodes 3c (see fig. 9 and paragraphs [0066-0072]); and second via-hole electrodes 11-14 provided in an area outside the resonator electrode and electrically connected to the first and second ground electrodes.

The subject matter of claim 6 is shown in figure 8B.

The subject matter of claim 7 is shown in figure 15B.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mizoguchi et al. (US Pat. App. Pub. 2004/0183629) in view of Mizoguchi et al. (JP 2002-325002).

Mizoguchi et al. (US Pat. App. Pub. '629) does not show at least one additional via-hole electrode for connecting at least one of the input-output electrodes. However, such via-hole is well known in the art. Mizoguchi et al. (fig. 1(a)-2(b)) discloses a similar

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dual mode bandpass filter having input-output electrodes 7a, 8a are connected to input-output terminal electrodes 5, 6 through via-holes 7, 8. Therefore, it would have been obvious to one of ordinary skill in the art to provide additional via-hole to connected the input-output coupling electrodes to the input-output electrodes in the device of Mizoguchi et al. (US Pat. App. Pub. '629) since such design technique is well known in the art as shown by Mizoguchi et al. (JP '002).

Claims 1-5 and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizoguchi et al. (JP 2002-325002 or JP 2002-335111) in view of Chaturvedi (US '850).

Mizoguchi et al. (JP '002, figs. 1(a)-2(b)) discloses a dual-mode bandpass filter comprising: a dielectric substrate 2; a rectangular resonator electrode 9 having an aperture 9a; first and second ground electrodes 3, 4 disposed on upper and lower surfaces of the dielectric substrate; input-output coupling electrodes 7a, 8a coupled to the resonator electrode; input-output terminal electrodes 5, 6 provided on the outside surface of the dielectric substrate and being electrically connected to the input-output coupling electrodes by additional via-holes 7, 8; and second via-hole electrodes 10, 11 provided in an area outside the resonator electrode and electrically connected to the first and second ground electrodes.

Mizoguchi et al. (JP '111, figs. 1-4) also discloses a dual-mode bandpass filter comprising: a dielectric substrate 2; a rectangular resonator electrode 23 having an aperture 23a; first and second ground electrodes 33, 38 disposed on upper and lower surfaces of the dielectric substrate; input-output coupling electrodes 27, 28 coupled to

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the resonator electrode; input-output terminal electrodes 31, 32 provided on the outside surface of the dielectric substrate and being electrically connected to the input-output coupling electrodes by additional via-holes 34a, 34b; and second via-hole electrodes 3 provided in an area outside the resonator electrode and electrically connected to the first and second ground electrodes.

Both Mizoguchi et al. references do not show a via-hole electrode disposed on the aperture and connected to the first and second ground electrodes.

Chaturvedi (fig. 2) discloses a ceramic package having a spiral transmission line and a via-hole electrode 202 located at the center of the ceramic package to connect the upper and lower ground electrodes 212, 214. Chaturvedi also teaches that the transmission line can be a resonator (col. 8, lines 42-56) and the ceramic package is for a filtering device (see claim 2). It should be noted that the via-hole 202 is located at the center of a spiral transmission line 216.

It would have been obvious to one of ordinary skill in the art to provide a via-hole electrode at the aperture of the resonator electrodes and connected to the first and second ground electrodes in the devices of Mizoguchi et al. to reduce the size of the filter/package without interrupting the properties of the transmission line/resonator electrode as taught by Chaturvedi (col. 2, lines 26-35, col. 4, lines 46-60, and col. 9, lines 1-12).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mizoguchi et al. (JP 2002-325002 or JP 2002-335111) in view of Chaturvedi (US '850) as applied to claim 1 above, and further in view of Kanba et al. (US Pat. Appl. Pub. '960).

The modified devices of Mizoguchi et al. do not show the first and second ground electrodes disposed inside of the dielectric substrate. However, such design technique is well known in the art. Kanba et al. (fig. 1c) discloses such well known design technique. Therefore, it would have been obvious to one of ordinary skill in the art to place the first and second ground electrodes inside of the dielectric substrate in the modified devices of Mizoguchi et al. as an alternative way to design the filter since such design technique is well known in the art as shown by Kanba et al.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Uriu et al. (fig. 4) and Shapiro (fig. 3) disclose a multilayer filter device having a plurality of via-holes connected to upper and lower ground electrodes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seungsook Ham whose telephone number is (571) 272-2405. The examiner can normally be reached on Monday-Thursday, 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571)-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Seungsook Ham  
Primary Examiner  
Art Unit 2817

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